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### Education:

1999 MS. Material Science. Norfolk State University (NSU). Norfolk, VA.  
1996 BS. Electronics Technology NSU. Norfolk, VA., Summa Cum Laude.  
1987 AS. Natural Science. Tidewater Community College (TCC). Chesapeake, VA.  
1984 AS. Engineering Technology. Gainesville College. Gainesville, GA.  
1988 Engineering/Technical Assistant Certificate. TCC. Chesapeake, VA.

### Publications:

1. 2006 –
2. Pradhan, A K, Hunter, D, Dadson, J. B., Williams, T.M., Zhang, Kai, Lord, K., Lasley, B., Rakhimov, R.R., Zhang, Jun, Sellmyer, D.J., Roy, U.N., Cui, Y., Burger, A., Hopkins, C., Percy, N., **Wilkerson, A. L.**, *Ferromagnetism in nanocrystalline epitaxial Co:TiO<sub>2</sub> thin films*. Applied Physics Letters 86, 222503 (2005).
3. Watson, S.M., Zeng, L., Musielski, J., Wincheski, R.A., **Wilkerson, A.L.**, Broitman, E., Holloway, B.C., Reilly, A.C., *Carbon Nitride as a Buffer Layer for Magnetic Thin Films*, Thin Solid Films 2005; 476(1), 148-151 (2005).
4. Pradhan, A K, Zhang, Kai, Mohanty, S, Dadson, J, Hunter, D, Loutts, G B, Roy, U N., Cui, Y., Cui, Y., Burger, A., **Wilkerson, A. L.**, *Luminescence and spectroscopic behavior of Eu<sup>3+</sup>-doped Y<sub>2</sub>O<sub>3</sub> and Lu<sub>2</sub>O<sub>3</sub> epitaxial films grown by pulsed-laser deposition*. J. of Appl. Phys. **97**, 023513-1 (2005)
5. D.I. Malyarenko, H. Chen, **A.L Wilkerson**, E.R. Tracy , W.E. Cooke, D.M. Manos, M. Sasinowski, O. J. Semmes, *Ga<sup>+</sup> ToF SIMS Lineshape Analysis for resolution enhancement of MALDI MS spectra of a peptide mixture*. *Applied Surface Science*, Vol. 231-232 (2004), pp. 257-261.
6. Woerdeman, D.L., Parnas, R.S., Giunta, R.K., **Wilkerson, A.L.**, *Dewetting of Unreacted Epoxy/Amine Mixtures on Silica*. *Journal of Colloid and Interface Science*, Vol. 249, No.1, pp.246-252 (2002)
7. Masters Thesis NSU - Accepted May 16, 1999. *Investigation of Chromium and Manganese Doped Yttrium Aluminum Oxides using Electron Paramagnetic Resonance*.
8. Rakhimov, R. R., **Wilkerson, A.L**, Loutts, G.B., Noginov, M.A., Noginova, N., Lindsay, W. and Ries, H.R., *Spin and Valence States of Manganese Ions in Manganese-Doped Yttrium Orthoaluminate*. Solid State Com, **108**, 549 (1998).
9. Rakhimov, R.R., **Wilkerson, A.L.**, Loutts, G.B., and Ries, H.R., *Off-Axis Extra Lines in Powder Pattern Electron Paramagnetic Resonance of Cr<sup>3+</sup> in YAlO<sub>3</sub>*. J. Appl. Phys. **82**, 1970 (1997).
10. **Wilkerson, A.L.**, Ries, H.R., *A Problem Based Learning Approach to Reflection and Refraction*, NASA Conference Publication 3354, 1996.
11. **Wilkerson, A.L.**, *Computerized Testing of Woven Composite Materials*, NASA Conference Publication 3330, 1995.

### Conferences Attended and/or Presented:

1. 2005 – National Educators' Workshop, NIST, Poster Competition Judge, ARC Booth Representative, and Management Team.
2. 2005 – Jlab Open House 2005 – Organized Applied Research Center Lab Participants.
3. 2005/2004/2003/2002/2001/2000 – Laser Processing Consortium, JLAB, Newport News, VA. Workshop Participant.

4. 2004 – Joint AVS/ASM Conference, Raleigh, NC. Workshop Participant.
5. 2004 – SensorsGov Expo & Conference, Virginia Beach, VA. ARC Booth Representative.
6. 2003 - SIMS XIV Conference, San Diego, CA. Poster.
7. 2003 - AVS, 50<sup>th</sup> International Symposium & Exhibition, Baltimore, MD. Poster.
8. 2003 - National Educators' Workshop 2003, JLAB, Newport News, VA. Workshop Presentation.
9. 2002 - National Educators' Workshop 2002, San Jose, CA., Invited Speaker.
10. 2002 - 2<sup>nd</sup> International Workshop on Thin Films, Surfaces and Materials Processing Conference, JLAB, Newport News, VA. Poster.
11. 2001 - National Educators' Workshop, University of Maryland, East Adeiphi, MD. Poster.
12. 2001 - NSU Research Exposition, Innovations for Global Empowerment, Norfolk, VA. Poster.
13. 1999 - VA Academy of Science 77<sup>th</sup> Annual Meeting, ODU, Norfolk, VA. Poster.
14. 1999 - 1<sup>st</sup> International Workshop on Thin Films, Surfaces and Materials Processing Conference, ARC, Newport News, VA. Poster.
15. 1999 - Gainesville College Physics Club, Gainesville GA. Invited Speaker.
16. 1999 - NSU Engineering Week Participant - EPR/Center for Materials Research Exhibit.
17. 1999 - TMS National Convention, San Diego, CA. Poster.
18. 1998 - NIST Manhattan Poster Project, Gaithersburg, MD. Poster.
19. 1998 - National Educators' Workshop '98, Brookhaven National Lab. NY. Workshop Participant.
20. 1998 - National Engineering Week, NSU, Norfolk, VA. Presentation to Students.
21. 1997 - 29<sup>th</sup> Southeastern Magnetic Resonance Conference, UFL, Gainesville, FL. Poster.
22. 1997 - ASMI Materials Week, Indianapolis, IN. Presentation to Foundation Board of Directors.
23. 1996 – National Educators' Workshop '96, Los Alamos Lab, New Mexico. Presentation.
24. 1996 - International American Society for Engineering Education (ASEE) Conference, Washington DC. Poster Presentation.
25. 1995 – National Educators' Workshop '95, Oak Ridge National Lab, Oak Ridge, TN. Presentation of publication.

<b><u>Experience:</u></b>	<b>The College of William and Mary</b>	<b>Williamsburg, VA</b>
6/06 – present	Laboratory and Research Manager, Material Characterization Laboratories at the Applied Research Center. Supervisor Bernadette Kulas and Dr. Dennis M. Manos.	
1/00 – 6/06	Laboratory and Research Specialist II (Supervisor), Materials Characterization Laboratories at the Applied Research Center and Assistant to Dr. Dennis M. Manos and Bernadette Kulas.	
6/99 - 12/99	Ph.D. student and Applied Research Center Laboratory Assistant to Dr. Michael Kelley.	

<b><u>Experience:</u></b>	<b>Norfolk State University,</b>	<b>Norfolk, VA</b>
06/96 – 6/99	Electron Paramagnetic Resonance Research Assistant to Dr. Heidi Ries and Dr. Rakhim Rakhimov, Center for Materials Research.	
08/96 – 6/98	Physics Teaching Assistant, Department of Physics.	
06/95 – 10/95	Research Assistant to Dr. James Jacobs, Department of Technology.	

<b><u>Experience:</u></b>	<b>Norfolk Naval Shipyard</b>	<b>Portsmouth, VA</b>
01/86-06/94	Journeyman Level Marine Machinist Mechanic	

Completed a four-year apprenticeship for Journeyman Marine Machinist Mechanic. Overall GPA 3.67/4.0. Apprenticeship and Journeyman certificate certified by the U.S. Department of Labor, U.S. Department of the Navy, and the Commonwealth of Virginia. Repair nuclear machinery on both surface craft and submarines. Nuclear qualified and nuclear freeze seal qualified. Repair, replace, and test, sub-safe system valves and systems. Complete overhaul of oxygen systems on submarines. Fully sub-safe qualified. Repair, install, and test automatic boiler controls, high-pressure air systems, and steam systems on surface craft. Training, performance, service, charity work available upon request.

### **Memberships:**

- American Vacuum Society (AVS)
- ASM International Southeast VA Chapter– 2001-Secretary, 2002-Vice Chair, 2003-Vice Chair.
- VA Academy of Science - 1999
- Joint ASM Materials Information Society /TMS, NSU Chapter - '98-'99 Chairman.
- International Electron Paramagnetic Resonance Society (EPR).
- Society of Manufacturing Engineers (SME), NSU Chapter Engineering Week '96– Secretary: 1995.
- IEEE, NSU Chapter
- Toastmasters International Norfolk Naval Shipyard Merrimac Club, 1989-President, 1990-Administrative Vice President, 1989-SpeechCraft Coordinator.
- Toastmasters International Daily Press, 2005- present.
- International Association of Machinists and Aerospace Workers (member from 1986 to 1994)
- Federal Women's Program, Norfolk Naval Shipyard, Advisory Committee - 1991.
- Holland Ladies Ruritan Club, 1992-President, 1993-Secretary.

### **Continuing Education:**

1. 2005 – AVS Workshop JLAB, Newport News, VA
2. 2005 – Materials Selection for Applications Seminar, JLAB, Newport News, VA
3. 2005 – Laboratory Safety Institute, 2-day lab safety workshop, Richmond, VA
4. 2004 - Advanced Topics in SEM, FAMS Scanning 2004, Washington D.C.
5. 2004 - National Inst. & Edmund Optics Make Machine Vision Work for You, Hampton, VA.
6. 2004 - Wear & Wear Prevention Seminar, CeBAF Center, Newport News, VA.
7. 2003 - Introduction to Surface Analysis Techniques, San Diego, CA.
8. 2003 - Basic Principles of SIMS Mass Spectrometers, San Diego, CA.
9. 2003 - One day on-site training, Imaque Imaging, Hitachi 570 Scanning Electron Microscope.
10. 2003 - One day on-site training, Digital Electronics, Scanning Tunneling Microscopy.
11. 2003 - One day training and demo, Hitachi Corp., Cold Field Emission SEM. Gathersburg, MD.
12. 2003 - One day on-site training, Energy-Dispersive X-Ray Spectroscopy, Thomson Scientific Instruments.
13. 2002 - One day on-site training, Physical Electronics, ToF-SIMS
14. 2002 – Failure Analysis Seminar, CeBAF Center, Newport News, VA
15. 2002 – One day on-site training, Orion High Resolution Image Grabbing System, Imaque Imaging.
16. 2002 – Two day on-site training, Imaque Imaging, Hitachi 570 Scanning Electron Microscope.
17. 2002 - Three day on-site training, Digital Electronics, Atomic Force Microscope.
18. 2002 - Thermo Nicolet Spectroscopic Solutions Seminar on FTIR Spectrometer. Williamsburg, VA.
19. 2001 - One day on-site training, Zeiss Microscope-Spot Insight High Resolution Image Grabbing System, Diagnostics Instruments, Inc.
20. 2001 - One day on-site training, Vickers Micro-Hardness Tester, Cams Windows System.
21. 2001 - One day on-site training, Zeiss Microscope, Transmitted light (Bright Field/Dark Field).
22. 2000 - Thermo Nicolet Spectroscopic Solutions Seminar on FTIR Spectrometer, Columbia, MD.
23. 2000 - One day on-site training, Zeiss Microscope. Reflected light (Bright Field/Dark Field).
24. 2000 - Two day on-site training, Thermo Nicolet, Fourier Transform Infa-red Spectrometer.
25. 2000 - One week on-site training, Physical Electronics, ToF-SIMS
26. 1999 - One week on-site training, X-Ray Photoelectron Spectrometer.
27. 1999 - One week on-site training, Physical Electronics, ToF-SIMS
28. 1998 – One week on-site training, Bruker Electron Spin Resonance, Norfolk State University.
29. 1997 - The LeaderShape Institute, Champaign, ILL. One week Leadership Participant.
30. 1997 - Writing a Technical Paper for an International Audience - Materials Engineering Institute.
31. 1996 - Certification by the National Association of Industrial Technology (NAIT) as a Registered Certified Industrial Technologist.
32. 1992 - Women in Business Seminar, Annual Women in Business Seminar Expo, Norfolk, VA.

33. 1991- Professional Development for Women, Clemson U. College of Commerce and Industry, VA Beach, VA.
34. 1990 - How to Manage Multiple Priorities, National Seminars Group, Norfolk, VA.

### **Seminar Participation:**

1. 2005 – Hampton Roads Technology Council In the Loop Luncheon- NanoTechnology in Hampton Roads.
2. 2004-ASM Eastern Wear & Wear Prevention Seminar, JLAB. Program Coordinating Committee.
3. 2003-Jlab Open House 2003-Organized ASM Society Tour of Jefferson Labs.
4. 2003- National Educators' Workshop, NASA/Jlab, Hampton/Newport News, Management Team.
5. 2002-National Educators' Workshop, San Jose, CA, Member of the Management Team.
6. 2002-ASM Eastern Annual High School Student Night Program, JLAB, Program Coordinator.
7. 2001-Jlab Open House 2001-Organized Applied Research Center Participants for Exhibits.
8. 2001-ASM Eastern High School Student Night Program, Richmond, Va. Program Committee.
9. 2000-ASM Eastern Failure Analysis Corrosion Seminar, JLAB. Program Coordinating Committee.
10. 2000-ASM Eastern Annual High School Student Night Program, JLAB, Program Coordinator.
11. 1999-ASM Eastern Failure Analysis Seminar, Siemens VDO, Newport News, VA. Participant.
12. 1998-NSU Science and Engineering Open House, Assistant to the Coordinator, Dr. H. Alan Rowe.
13. 1998-Technology Partnership 2000 Seminar - Meeting the Needs of Business, Industry and Government. NSU Participant.
14. 1996 - Panelist for FIRST VIEW, Norfolk State University's Annual Open house (~1000 in audience).

### **Special Assignments:**

- Numerous Laboratory Tours (See Student Newsletters).
- Preparation and completion of JLAB OSHA Compliance Inspection of W&M Applied Research Labs.
- Set up database of entire Applied Science inventory. Primary locator of inventory.

### **Academic Recognition:**

- Golden Key National Honor Society
- TMS 1999 Annual Meeting Scholarship Winner.
- 1997 - ASM Foundation Winner to attend the LeaderShape Institute (only 2 students chosen Nationally). ASM LeaderShape Award Recipient.
- 1997 - All-American Scholar, United States Achievement Academy.
- 1996 - Technology Award Certificate in Recognition of Scholastic Achievement, Volunteer Services Rendered and Dedication to the Department of Technology, NSU.
- 1995-1996 - Norfolk State University Honors Program.
- 1995-1996 - Parsons Honors Program NSU.
- 1995 - Alpha Kappa Mu Honor Society Mu Zeta Chapter.
- 1994-1995 - National Dean's List.
- 1994-1995 – NSU Dean's List
- 1984 - Who's Who Among Students in American Junior Colleges.
- 1983 - Division of Natural Sciences and Math Foundation Scholarship, Gainesville College, GA.

### **Special Recognition:**

- 1996 – Publication in Golden Key National Honor Society's international magazine **Concepts** for my non-fiction article, "*The Final Chapter.*"
- 1995 – **National Civilian of the Year Award** – Federal Law Enforcement Officers Association.
- 1994 – U.S. Department of Justice **National Award for Public Service.**
- 1992 - Norfolk Naval Shipyard "**Woman of the Year**" Award (articles).

### **Hobbies:**

- Swimming

- National Corvette Restorer Society – 2002-2006 Southeast Mid-Atlantic Chapter Representative. 2005 – Hosted March Technical & Judging training session. 2003-Organizing committee member for the 2003 NCRS National Convention at Hershey Park, Penn. (which was also shown on CNN).

### **Acknowledgements:**

- Edwin J. Prior, James A. Jacobs, William Edmonson and **Amy Wilkerson** (Compilers), National Educators' Workshop: Update 2003 Standard Experiments in Engineering, Materials Science, and Technology, Part 2, NASA Center for AeroSpace Information (CASI) NASA/CP-2004-213243/PT1, September 2004, pp. 569, (172MB).
- Edwin J. Prior, James A. Jacobs, William Edmonson and **Amy Wilkerson** (Compilers), National Educators' Workshop: Update 2003 Standard Experiments in Engineering, Materials Science, and Technology, Part 1, NASA Center for AeroSpace Information NASA/CP-2004-213243/PT2, September 2004, pp. 552, (103MB).
- Published article where I operated the ToF-SIMS to acquire the data and was put in the acknowledgments section. Michael J. Kelley, *Surface Processing and Micromachining of Polyimide Driven by High Average Power Infrared Free Electron Laser*. Materials Research Society Symposium Vol 617 @2000 Materials Research Society.
- Published article where I operated the ToF-SIMS to acquire the data and was put in the acknowledgments section. Christine F. Conrad, Catherine J. Chisholm-Brause, Michael Kelley. *Pb(II) Sorption onto  $\gamma$ -Al<sub>2</sub>O<sub>3</sub> Surfaces at the Oxide-Water Interface: A Novel Approach Using Planar Oxides*. Journal of Colloid and Interface Science, Vol 248, pp275-282 (2002).
- Poster presentation by G.B. Loutts, R.R. Rakhimov, **A.L. Wilkerson**, G.B. Loutts, and H.R. Ries. *Off-axis extra lines in powder pattern electron paramagnetic resonance of Cr<sup>3+</sup> in YAlO<sub>3</sub>*. 20<sup>th</sup> International EPR Symposium, August 3-7, 1997, Denver, Colorado, poster 1-3-1.
- Poster presentation by G.B. Loutts, R.R. Rakhimov, **A.L. Wilkerson**, W. Lindsay, N. Noginova, G.B. Loutts, M.A. Noginov, H.R. Ries, *Spin states of manganese ions in manganese-doped yttrium orthoaluminate*, 21<sup>st</sup> International EPR Symposium, July 26-30, 1998, Denver, Colorado.